

REMARKS

By the above amendment, the features of dependent claims 2 - 5 have been incorporated into parent claim 1, with claims 2 - 5 being canceled and dependent claims 6 and 7 remaining without amendment.

Additionally, applicants have amended Figure 4 of the subject application to include the legend "Prior Art". It is respectfully requested that the drawing corrected by accepted. A formal replacement sheet of drawing is respectfully submitted.

The rejection of claims 1 - 7 under 35 USC 102(e) as being anticipated by Kumar (US 6,591,758) is traversed and reconsideration and withdrawal of the rejection are respectfully requested.

As to the requirements to support a rejection under 35 USC 102, reference is made to the decision of In re Robertson, 49 USPQ 2d 1949 (Fed. Cir. 1999), wherein the court pointed out that anticipation under 35 U.S.C. §102 requires that each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. As noted by the court, if the prior art reference does not expressly set forth a particular element of the claim, that reference still may anticipate if the element is "inherent" in its disclosure. To establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." Moreover, the court pointed out that inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.

In accordance with the present invention, as recited in claim 1, a railway car drive system comprises, first, second and third railway cars in which the first railway

car mounts a power generation means, a power converter and a driving motor, the second railway car mounts a power converter and a driving motor using the power generation means as a power source, and a power storage means is mounted on at least one of the first and second railway cars, as previously recited in claim 1. As now recited in claim 1 and previously recited in dependent claim 3, there is also provided "a third railway car mounting a power storage means to thereby increase the capacity of the power storage means of said railway car drive system" (emphasis added) and as previously recited in dependent claims 4 and 5, there is provided "a power management means for controlling the power generated by said power generation means and the storage quantity of said power storage means so as to minimize the power capacity of said power generation means" (claim 4), and "said power management means being disposed in every car so as to control each said power generation means and said power storage means independently" (emphasis added) (claim 5). Applicants submit that such features are not disclosed in the cited art in the sense of 35 USC 102.

Although the Examiner refers to Figure 3 of Kumar as showing a first railway car having a power generation means 102, a power converter 106 and a plurality of driving motors 108 with a second railway car having a power converter 306 and a plurality of driving motors 308 and also a second power generation means 302. The Examiner's statement that "The driving motors use power from the generation means 102, 302 of each car to operate the respective driving motors" (emphasis added) is considered to be a recognition that the power generation means 102 operates the driving motors 108 of its car while the power generation means 302 operates the driving motors of its car. This is confirmed by the description in column 8, lines 24 - 48 of Kumar. Thus, applicants submit that Kumar does not disclose a second

railway car mounting a power converter and a driving motor using the power generation means (of the first railway car) as a power source. That is, the second engine vehicle 301 comprises a diesel engine 302 which drives the alternator/rectifier 304, one or more inverters 306, and a plurality of braking grids 310. See column 8, lines 26 - 33 of Kumar. Accordingly, applicants submit that Kumar does not disclose the structural arrangement as originally recited in claim 1 in the sense of 35 USC 102 and claim 1 patentably distinguishes over Kumar in this feature alone.

The Examiner further indicates that a power storage means is also incorporated into the system with the figures showing the energy storage means to be mounted on a separate third rail car, which as shown in Fig. 3 of Kumar is represented by the energy capture and storage 204 mounted on the third rail car. While the Examiner contends that Kumar discloses in column 6, line 32 - 49, that the energy storage means can be fitted onto the same car with the other aforementioned components, applicants submit that such disclosure merely suggest various possibilities. However, assuming arguendo, that this description in Kumar is sufficient to provide a power storage means in a third railway car in addition to at least one of the first and second railway cars, it is not seen that such overcomes the deficiency of Kumar et al with respect to the other claimed features of claim 1 as pointed out above.

Furthermore, claim 1 recites the feature of a power management means being disposed in every car so as to control each said power generation means and said power storage means independently. The Examiner contends that a power management system 502 and a processor 506 are provided in the system as

described in column 10, lines 40 - 65 of Kumar with Figure 5 showing a block diagram showing energy generation and storage. The Examiner states:

The Examiner interprets this diagram to be for each system on each car of the system. Therefor, each car with a power generating means and energy storage means would be equipped with a power management system (emphasis added).

Applicants submit that this position by the Examiner is based upon speculation of the Examiner and is contrary to the disclosure of Kumar. More particularly, Figure 5 discloses a single energy management system 502 for possibly enabling control of the engine 102, the energy capture and storage 204 and various structure with respect to all of the railway cars. This fact is readily apparent from the illustration in Fig. 5 of an additional energy source 504 controlled by the energy management system 502 and the description at column 9, lines 55 - 62 of Kumar that an optional energy source 504 is preferably controlled by the energy management system 502 which optional energy source 504 may be a second engine, (e.g., the charging engine illustrated in Fig. 3 or another locomotive in the consist) or a completely separate power source. Thus, assuming, arguendo, that the additional energy source is representative of the engine 302 in Fig. 3, it is readily apparent that the disclosure of Kumar does not disclose in the sense of 35 USC 102 that the power management means is disposed in every car so as to control each said power generation means and said power storage means independently. As noted in the decision of In re Robertson, supra, inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. Thus, applicants submit that claim 1, as amended, incorporating the features of dependent claims 2 - 5 therein patentably distinguishes over the cited art under 35 USC 102 and it cannot be considered obvious from the disclosure of Kumar to provide the claimed features in the sense of


35 USC 103. Accordingly, applicants submit that claim 1 together with dependent claims 6 and 7 which define further features of the present invention patentably distinguish over Kumar and should be considered allowable thereover.

In view of the above amendments and remarks, applicants submit that all claims present in this application should now be in condition for allowance and issuance of an action of a favorable nature is courteously solicited.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 648.43135X00), and please credit any excess fees to such deposit account.

Respectfully submitted,

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Amendments to the Drawings:

The attached sheet of drawing includes changes to Fig. 4. This sheet, which includes Fig. 4, replaces the original sheet including Fig. 4, which has now been labeled with the legend "Prior Art".

Attachment: Replacement Sheet

Annotated Sheet Showing Changes

This diagram illustrates a power distribution system with multiple units. A central horizontal line represents a main power bus. On the left, a 'POWER GENERATOR' (10) is connected to this bus. On the right, a 'POWER CONVERTER' (20) is connected to the bus. The bus is divided into three sections by two vertical lines. Each section contains a 'POWER CONVERTER' (20) and a series of three circular components (30). The entire system is labeled with a bracketed '1' on the left and a bracketed '2' on the right. A bracketed '10' is placed near the power generator, and a bracketed '20' is placed near the power converter. A bracketed '30' is placed near the circular components. A bracketed '40' is placed near the central bus line.